SONY

3-864-087-12(2)

Home Theater Active Speaker System

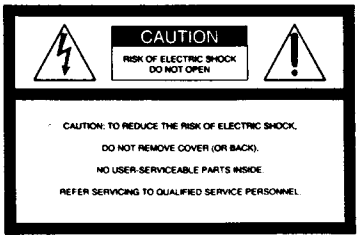
Operating Instructions

SAVA-59

© 1998 by Sony Corporation

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Owner's record

The model and serial numbers are located on the rear of the unit. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. SAVA-59

Serial No. _____

For the customers in Canada

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

Precautions

On safety

- Should any solid object or liquid fall into the cabinet, unplug the speaker system and have it checked by qualified personnel before operating it any further.

On power sources

- AC power cord must be changed only at the qualified service shop.
- Before operating the speakers, check that the operating voltage is identical with your local power supply. The operating voltage is indicated on the nameplate on the rear of the speakers.
- The speakers are not disconnected from the AC power source (mains) as long as they are connected to the wall outlet, even if the speakers themselves have been turned off.
- If you are not going to use the speakers for a long time, be sure to disconnect the speakers from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.

On placement

- Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.
- Do not place the speakers near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Good ventilation is essential to prevent internal heat buildup. Place the speakers in a location with adequate air circulation, and in a way that does not block the rear ventilation holes.

On cleaning

- Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

If you have any question or problem concerning your speaker system, please consult your nearest Sony dealer.

Welcome!

Thank you for purchasing the Sony speaker system.
The SAVA-59 is a home theater active speaker system incorporating a Dolby Pro Logic decoder, 5.1-channel input jacks, internal/external center speakers and sub woofer speakers.
This system is easy to setup and allows you to enjoy five different types of surround sound, accommodating a variety of program sources.

About This Manual

Before operating the unit, please read this manual thoroughly and retain it for future reference.

The instructions in this manual describe the controls on the left speaker. You can also use the controls on the remote if they have the same or similar names as those on the left speaker.

- The following icons are used in this manual:

Indicates that you can use the remote to do the task.

Indicates hints and tips for making the task easier.

- This speaker system incorporates the Dolby Pro Logic Surround System.*

* Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY, the double-D symbol DD and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

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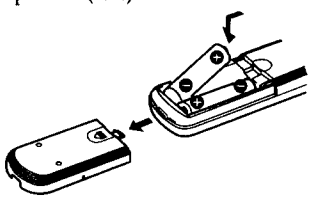
Unpacking

Check that you received the following items with your speaker system:

- External center speaker SS-CN15VA (1)
- Wireless rear speaker system SA-IF70 (L), (R)
- Wireless infrared transmitter EMT-70 (1)
- Front L/R speaker connecting cord, 3.5 m (1)
- Center speaker connecting cord, 2.5 m (1)
- Audio connecting cord, 1.5 m (1)
- Remote commander (remote) RM-J59 (1)
- Sony size-AA (R6) batteries (2)
- Foot pads (4)

Inserting batteries into the remote

Insert two size-AA (R6) batteries with the terminals matched to the + and – on the battery compartment. When using the remote, point it at the remote sensor ■ on the front speaker (left).



When to replace batteries

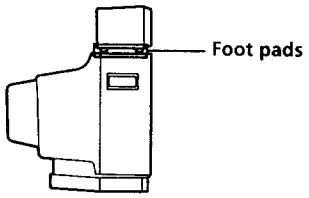
Under normal use, the batteries should last for about 6 months. When the remote no longer operates the speakers, replace both batteries with new ones.

Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with an old one.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you do not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Attaching the supplied foot pads to the external center speaker

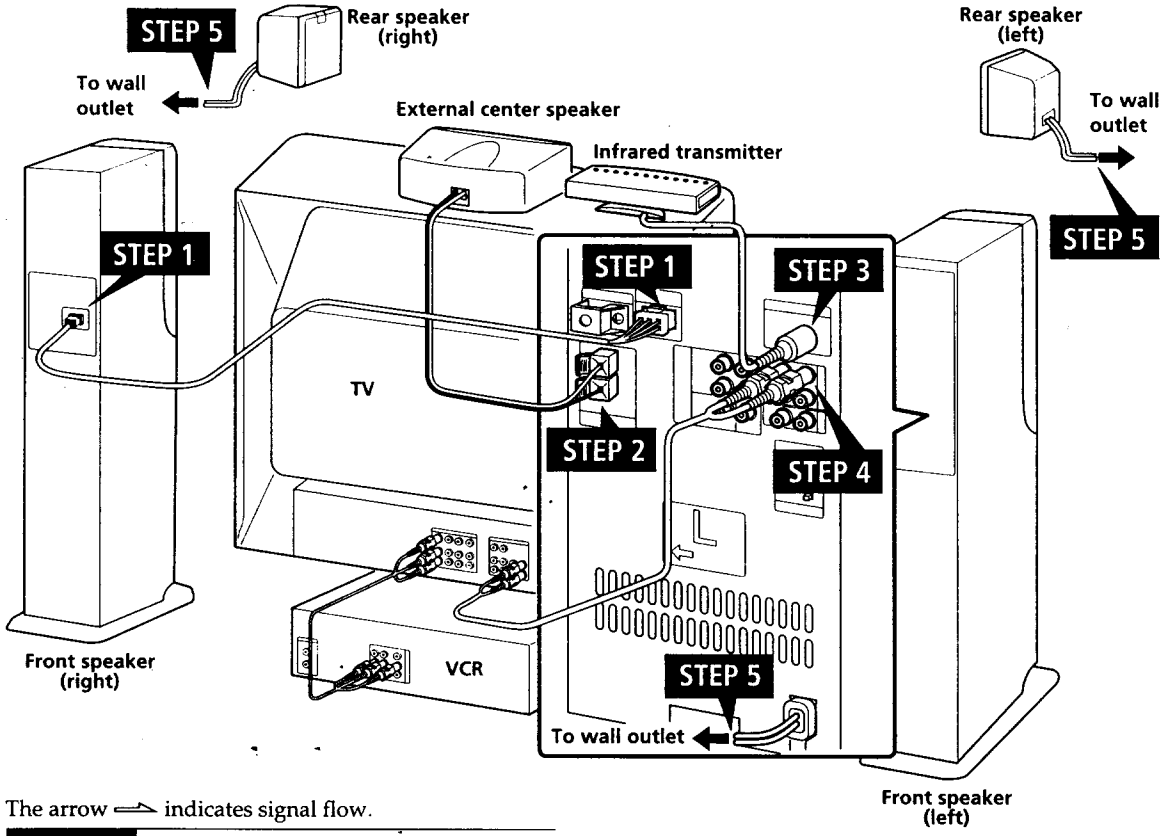
To place the external center speaker on your TV set, attach the supplied foot pads to the bottom of the speaker, one in each of the four corners. Make sure that the speaker stands flat on top of the TV.



Do not place the speaker on top of a TV set which is smaller than the speaker.

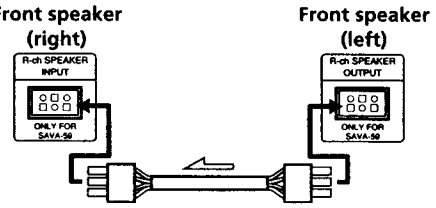
Speaker System Hookups

This section describes how to connect the speaker system to your TV and VCR.

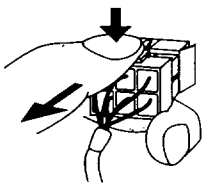


The arrow ⇨ indicates signal flow.

STEP 1 Connecting the front speakers



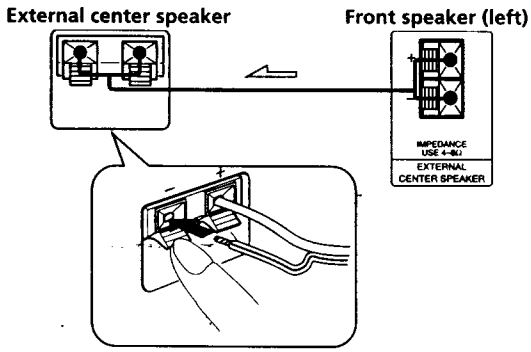
To disconnect the cord, pull the connector out while pressing the release tab. Never pull the cord itself.



STEP 2 Connecting the external center speaker

Use the supplied speaker cord (2.5 m) to connect the external center speaker.

Insert the stripped wires into the speaker terminals.

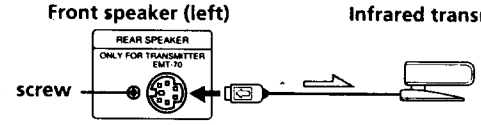


Be sure to connect matching speaker terminals (e.g., use the solid-color wire to connect + to +, and use the striped wire to connect – to –). If the connections are reversed (+ to –), the sound will lack bass.

(Continued)

STEP 3 Connecting the transmitter

Connect the infrared transmitter to the REAR SPEAKER terminal on the back of the front speaker (left). Insert the connector with the arrow into the jack to the side of the screw.

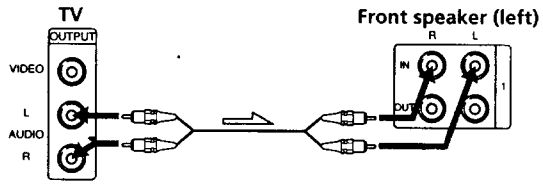


STEP 4 Connecting your TV

If the audio and video output terminals on your TV and VCR are already connected, and your TV has stereo AUDIO OUT jacks, you can start enjoying surround sound simply by connecting the speaker system to your TV as shown below.

Important

If your TV has an on/off switch for its internal speaker, set this to off, and enjoy the sound from this speaker system. If not, set the volume on your TV to minimum.



If you use AUDIO OUT jacks marked VARIABLE

After making the connection as shown above, turn up the volume on the TV. Use this speaker system's volume control for regular volume adjustment. Turning down the volume on the TV reduces the AUDIO OUT signal level and may cause a loss in sound quality and/or activate the auto-power off function (see page 9).

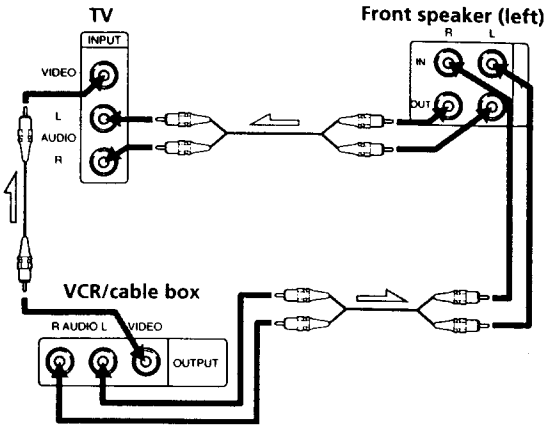
For the best possible sound (or if your TV only has a monaural AUDIO OUT jack, or no AUDIO OUT jacks)

Connect the speaker system directly to your VCR or cable box.

The following connections suppress noise from the TV and let you enjoy high-quality sound.

1 Connect your VCR or cable box to the 1 IN jacks on the front speaker (left).

2 Connect your TV to the 1 OUT jacks on the front speaker (left).



Note

Do not connect any component other than your TV to the 1 OUT jacks on the front speaker (left).

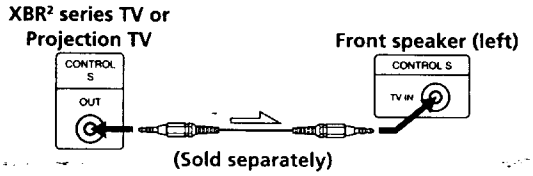
If you have a Sony XBR² series TV or Sony Projection TV equipped with a speaker switch (For U.S. and Canadian customers only)

If your Sony XBR² series TV or Projection TV is compatible with SAVA series speakers, you can use the TV's menu and remote control functions to operate this speaker system.

For details, see the operating instructions supplied with your TV.

Be sure to connect the 1 IN jacks on the front speaker (left) to the TV's FIXED AUDIO OUTPUT jacks if you make this connection.

1 Use an optional CONTROL S cord to connect the CONTROL S TV IN jack on the front speaker (left) to the CONTROL S OUT jack on the back of the TV.



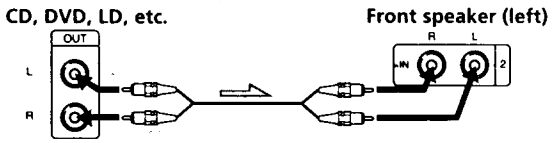
2 Follow the instructions supplied with your TV to set it to operate this speaker system.

STEP 5 Connecting the AC power cords

Connect the AC power cords from the front and rear speakers to wall outlets. The STANDBY indicator on the front speaker (left) and the infrared receptors on the rear speakers light red.

Other Components Hookups

Since this speaker system has an internal amplifier and preamplifier, you can output signals directly from components, such as CD players, DVD (2 ch) players, LD players, etc.



Note

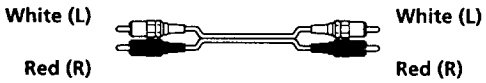
Do not connect an amplified audio source. The combined amplification from the component and the speaker's internal amplifier may damage the speakers.

5.1-channel Input Hookups

This speaker system is equipped with 5.1-channel input (5.1 CH IN) jacks. By connecting your DVD player or other digital video source through a multi-channel decoder (e.g., Dolby Digital (AC-3) decoder, DTS decoder) to these jacks, you can enjoy theater-quality Multi-Channel Surround sound in your own home. Refer to the instruction manual supplied with your Dolby Digital (AC-3) decoder etc., for details on the 5.1-channel input hookups.

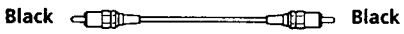
Audio cords (not supplied)

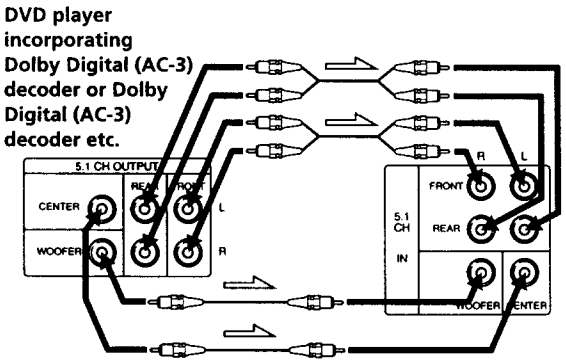
Two for the 5.1 CH IN FRONT and REAR jacks



Monaural audio cords (not supplied)

Two for the 5.1 CH IN CENTER and WOOFER jacks





Setting the Dolby Digital (AC-3) decoder

Specify the speaker type in the decoder's display as below:

Specify	by selecting
front speaker size	LARGE
center speaker size	LARGE
rear speaker size	SMALL
sub woofer selection	YES

To enjoy theater-quality Multi-Channel Surround sound

Press INPUT repeatedly on the operation panel until "5.1 CH IN" appears in the display or press INPUT 5.1 on the remote.

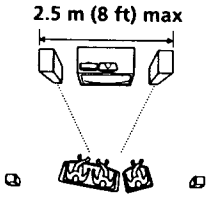
Note

When 5.1-channel input is selected, the PRO LOGIC, THEATER, HALL, STADIUM and GAME surround modes do not function.

Choosing the Best Location

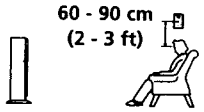
Front speakers

To obtain high sound quality and a proper sound image from the front speakers, place the speaker with the built-in operation panel to the left of your TV and the other to the right of your TV.
For the best sound image, place the left and right speakers within 2.5 m (8 ft) of each other and equidistant from the TV.

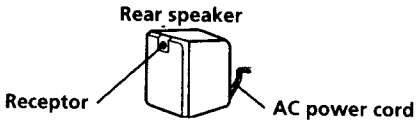


Rear speakers and transmitter

Place the rear speakers so that they face directly across from each other about 60 to 90 cm (2 to 3 ft) above the listener's ear.

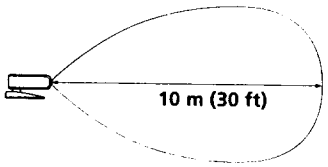


The rear speaker system has infrared receptors to receive signals from the supplied transmitter.

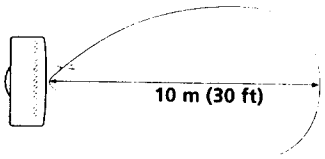


The following diagram illustrates the effective range of the infrared rays emitted from the transmitter.

Side view

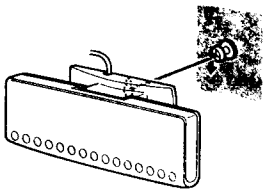


Top view

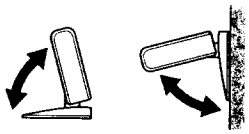


You can place the transmitter on a television, a bookshelf, etc., or you can hang it on a wall.

Hanging the transmitter on the wall



When you select a surround mode using the rear speakers, power is supplied to the transmitter, which emits a signal. When the rear speakers receive the signal, the receptors light green. If the receptor stays red, adjust the position and angle of the transmitter until it goes green.



Cautions

- There may be interference if you operate this system at the same time as other infrared remote control equipment. If interference occurs, avoid using the two systems simultaneously.
- Before disconnecting the infrared transmitter cord from the REAR SPEAKER terminal, turn off the system to avoid damaging the speakers.
- Before disconnecting the AC power cord of the front speaker (left), turn off the system.
- Placing the rear speakers near a light bulb or in direct sunlight may cause noise to be generated by the speakers.

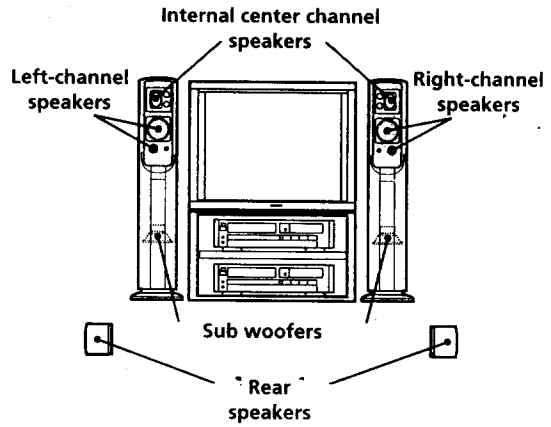
Notes

- The infrared rays will not penetrate walls or opaque glass. Therefore, the transmitter must be placed in "line of sight" of the rear speakers.
- Placing the transmitter too far away from the rear speakers may cause noise.
- After operating continuously for a long time the surface of the transmitter may become hot. This is not a malfunction.

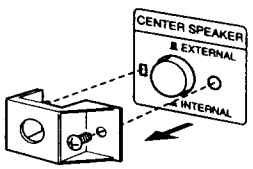
Using the Internal Center Speakers

Using the built-in center speakers to enjoy surround sound without the external center speaker

The SAVA-59 provides a center speaker in each of the front speakers, enabling you to enjoy Dolby Pro Logic Surround and Dolby Digital (AC-3) sound without the external center speaker.
The left and right front speakers are equipped with center channel speakers (see below) angled inwards at 15° to reproduce the center channel sounds.



Use a screwdriver to remove the screw holding the CENTER SPEAKER button cover in place. Then depress the CENTER SPEAKER button. This switches signal output from the EXTERNAL CENTER SPEAKER terminal to the internal center speakers .



Turning the Speaker System On and Off

Press I/⏻ on the remote or the front speaker (left).
The front speaker ON(GREEN)/READY indicator lights green.
The receptors on the rear speakers light green.

Power turns on and off automatically (Auto power on/off function)

You do not need to turn the speaker system on every time you use it. Three minutes after the sound source goes off (when you turn off the TV, or the currently playing video/laserdisc ends), the speakers turn off automatically and the ON(GREEN)/READY indicator turns red.
The speakers turn on by themselves the next time you turn on the TV or start playback from the VCR.

If you press I/⏻ when the speakers are on
The speakers switch to standby mode (the ON(GREEN)/READY indicator goes off), and the auto power on/off function turns off. In this case, press I/⏻ again to turn the speakers on.

If the receptor on the rear speaker lights red
The receptor does not light green when you select PRO LOGIC (3 STEREO) or SUR OFF. If it does not light to green for other surround modes, adjust the position and angle of the transmitter (see "Choosing the Best Location" on page 8).

Note
The auto power on/off function does not function when 5.1-channel input is selected.

Adjusting the contrast of the display window

You can dim the display or turn it off, according to your preference.

Press DIMMER on the remote a few times until the display mode you want appears.
The display returns to full brightness temporarily when you press one of the buttons on the remote.

Enjoying Surround Sound

You can take advantage of the speaker's surround sound capability simply by choosing a surround mode according to the type of program you are watching. This system is provided with five different surround modes:

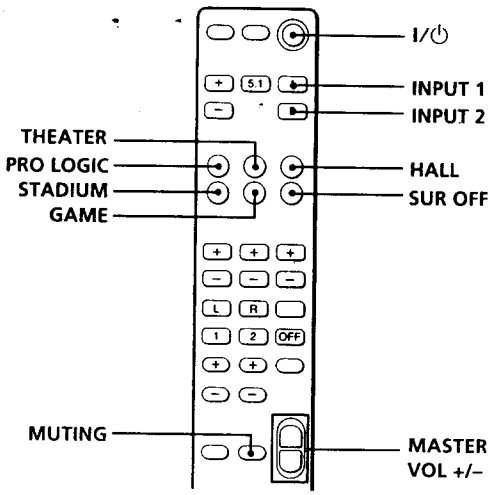
PRO LOGIC (Dolby Pro Logic) surround mode
Reproduces superb theatre-like presence and surround effects from video software encoded with Dolby Surround.

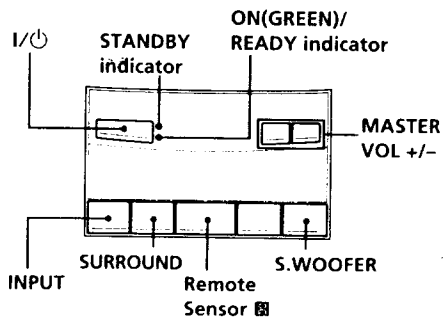
THEATER surround mode
Creates a theater-like environment in your living room by adding the acoustic reflections of a theater to decoded Dolby Surround signals.

HALL surround mode
Reproduces the acoustics of a rectangular concert hall. Ideal for soft, acoustic sounds, or for giving an extra punch to debates and press conferences.

STADIUM surround mode
Provides a sense of presence similar to that of an open-air stadium. Ideal for maximum enjoyment of broadcasts of sporting events like football.

GAME surround mode
Obtains maximum audio impact from video game software.





1 Press I/⏻.
The ON(GREEN)/READY indicator lights (green) and the speakers turn on.

2 Press INPUT 1 or 2 on the remote or INPUT on the operation panel to select the program source. For example, if you connected your VCR to the 1 IN jacks, select INPUT 1.
The selected program source appears in the display.

3 Start playback on the program source.

4 Press either PRO LOGIC, THEATER, HALL, STADIUM, or GAME on the remote, or SURROUND on the operation panel a few times, according to the program you want to enjoy.
You can adjust the sound for each individual surround mode. (See "Adjusting the Surround Sound" on page 11 and "Adjusting the Sound" on page 12.)

Program	PRO LOGIC	THEATER	HALL	STADIUM	GAME	SUR OFF
Recent movies		●				
Concerts, music			●	●		●
Sports			●	●		●
Old movies, monaural TV programs					●	●
Video games					●	●
Education programs, news						●

To listen without surround effects

Press SUR OFF on the remote, or press SURROUND on the operation panel a few times until "SUR OFF" is displayed.

5 Press MASTER VOL + or – to adjust the volume.

To mute the sound

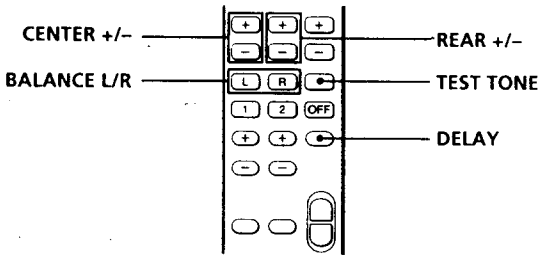
Press MUTING on the remote.
To restore the sound, press MUTING again.

Notes

- Some videos and laser discs may include Dolby Pro Logic Surround sound even if it's not indicated on the package.
- The surround modes do not function when 5.1-channel input is selected.
- To enjoy PRO LOGIC surround mode when playing your DVD, select INPUT 2 on the operation panel or remote.
- When you first turn on the speakers or when you change the surround mode from SUR OFF to another mode, no sound will be emitted from the rear speakers for about three seconds. This is normal and does not constitute a malfunction.

Adjusting the Surround Sound

Although this speaker system is factory preset to provide balanced surround sound without adjustment, you can adjust the volume of each speaker and the delay time to accommodate the conditions in your living room or your individual preference.



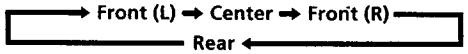
Adjusting the speaker volume

The test tone feature lets you adjust the volume of the sound coming from each speaker to the same level, so that the surround sound will be even and natural.

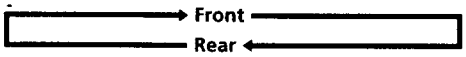
Make the following adjustments from your listening position.

1 Select the surround mode you want to adjust.

2 Press TEST TONE on the remote.
A test tone is emitted from each speaker in the following sequence:
When you select PRO LOGIC or THEATER



When you select HALL, STADIUM or GAME



3 Adjust the volume levels so that the test tone from each speaker is at the same volume level from your listening position:

To adjust the level	press
between the right and left front speakers	BALANCE L or R
of the center speaker*	CENTER + or –
of the rear speaker	REAR + or –

* You can adjust the center speaker volume level in the PRO LOGIC and THEATER surround modes only.

4 Press TEST TONE on the remote to turn off the test tone.
The adjustment levels for the selected mode are stored in memory.

Notes

- Pressing buttons other than MASTER VOL, CENTER+/–, REAR+/–, or BALANCE L or R cancels the test tone.
- The volume level of the center and rear speakers cannot be adjusted when the 5.1-channel input is selected. The test tone is emitted to allow you to check the speaker placement. To adjust the volume level, use your DVD or Dolby Digital (AC-3) decoder, etc.

Adjusting the delay time

By adjusting the delay time, you can enhance the spatial characteristics of the sound to obtain a theater-like presence regardless of the size of your room. If the rear speakers are close to your listening position, choose a longer delay time.
You can adjust the settings individually for PRO LOGIC, THEATER, HALL, STADIUM, and GAME.

Note

The delay time cannot be adjusted for the PRO LOGIC (3 STEREO) mode.

1 Select the surround mode.

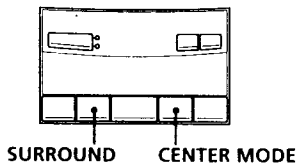
2 Playback a program.

3 Press DELAY on the remote once to display the current delay time.

4 Press DELAY a few times to choose the delay time you prefer, either 15, 20, or 30 ms.
The factory setting is 20 ms.
The delay time adjustment for the selected mode is stored in memory.

Setting the center mode

In PRO LOGIC or THEATER surround mode, you can choose from 4 different center modes: NORMAL, WIDE, 3 STEREO or PHANTOM. For normal use, select NORMAL or WIDE mode. When you use the supplied external center speaker, we recommend using WIDE mode.
To select the mode that you want, follow the procedure below.



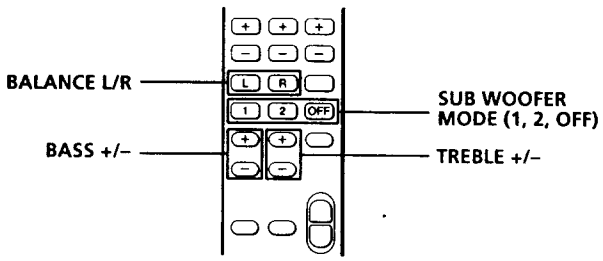
1 Press SURROUND on the front speaker (left) to choose PRO LOGIC or THEATER.

2 Press CENTER MODE on the front speaker (left) a few times until the center mode you want appears in the display.

Note
When using the internal center speaker, you cannot change the center mode setting.

Adjusting the Sound

Although this speaker system's sound quality is pre-adjusted at the factory, you can change the settings, as you like, for each surround mode individually. The adjusted settings remain stored for the respective surround mode until you change them.



1 Playback a program and choose a surround mode.

2 Make the following sound adjustments according to your preference and/or the type of program you are watching.

To	press
select the sub woofer mode	SUB WOOFER MODE 1, 2 or OFF*
adjust the sub woofer level	S.WOOFER + or –
adjust the bass level	BASS + or –
adjust the treble level	TREBLE + or –
adjust the balance	BALANCE L or R**

* SUB WOOFER MODE 1 provides powerful bass sound ideal for movies. SUB WOOFER MODE 2 provides a more subtle effect designed for music.

** Since BALANCE L and R control sound from the front speakers, they have little effect on DOLBY PRO LOGIC when the source software has a high proportion of center-channel sound.

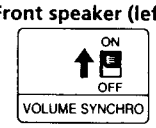
The sound adjustments are stored for the selected surround mode.

Note
You cannot adjust the bass/treble level and balance when 5.1-channel input is selected. To adjust these parameters, use your DVD or Dolby Digital (AC-3) decoder, etc.

Adjusting the Volume with a Sony TV Remote

Set the VOLUME SYNCHRO switch on the front speaker (left) to ON. You can then adjust the volume with the TV remote supplied with your Sony television. In this case, set the TV internal speakers to "OFF."

Front speaker (left)



Note
This function only operates with a Sony TV. You cannot control the volume of this speaker system with a TV remote from another manufacturer.

In the following cases, set the VOLUME SYNCHRO switch to OFF

- When your television is made by Sony but you cannot switch the internal speakers off.
- When you do not wish to adjust the volume of this speaker system with the TV remote.

If your television is a Sony XBR² or Sony Projection TV (For U.S. and Canadian customers only)

If your Sony XBR² series TV or Projection TV is compatible with the SAVA series speakers, you can make a setting on the TV so that you can control the speakers with the TV remote. Set the VOLUME SYNCHRO switch on the front speaker (left) to OFF. Set the TV internal speakers to "VA SPEAKER" or "SAVA SP." (See the operating instructions supplied with your model.) Using the supplied TV remote, you can now adjust the speaker volume, surround mode, and sub woofer mode.

Troubleshooting

If you experience any of the following difficulties while using the speakers, use this troubleshooting guide to help you remedy the problem. Should any problem persist, consult your nearest Sony dealer.

There's no sound from any of the speakers.

- ➡ Check that components are connected securely to the speakers.
- ➡ Make sure you selected the correct input (1, 2 or 5.1 ch).
- ➡ Press MUTING to cancel the muting function.
- ➡ Press MASTER VOL + to turn up the volume.
- ➡ If you are using the TV's VARIABLE AUDIO OUTPUT terminals, turn up the volume on the TV to increase the output level.

No sound or only a very low sound level is heard from the rear speakers.

- ➡ Surround sound is turned off.
- ➡ Adjust the volume of the rear speakers (see page 11).
- ➡ Check the sound image balance with TEST TONE (see page 11).
- ➡ The infrared transmitter is too far from, or not facing the rear speakers (see page 8).
- ➡ Remove any obstructions between the transmitter and the rear speakers.

There's no sound from the center speaker.

- ➡ Make sure you selected the PRO LOGIC or THEATER surround mode.
- ➡ No center speaker is connected, but the CENTER SPEAKER button on the rear panel is set to EXTERNAL.
- ➡ You connected an external center speaker, but the Dolby Pro Logic Surround center mode is set to PHANTOM.
- ➡ You connected an external center speaker, but the CENTER SPEAKER button on the rear panel is set to INTERNAL.

Severe hum or noise is heard.

- ➡ Make sure all connecting cords are placed away from any transformers or motors and least 3 meters (10 feet) from any fluorescent lights.
- ➡ Connect the speakers to your VCR or cable box instead of to your TV (see page 6).

Remote operations cannot be performed.

- ➡ Point the remote towards the remote sensor ■ on the front speaker (left).
- ➡ Remove any obstructions between the remote and this system's front speaker (left).
- ➡ Replace the batteries in the remote.

The volume cannot be controlled with the TV remote.

- ➡ The VOLUME SYNCHRO switch on the rear panel is set to OFF.
- ➡ The speakers are connected to a TV not manufactured by Sony.

Specifications

Audio Power Specifications

For front 2 way speakers: with 8 ohm loads, both channels driven, from 150 Hz – 20 kHz; rated 23 watts per channel minimum RMS power, with no more than 0.8% total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

Continuous RMS power output

Stereo channel	20 Hz-20 kHz, 0.8% THD 28 W ×2 (Front, 8 ohms) + 30 W ×2 (Sub woofer, 6 ohms)
Surround channel	20 Hz-20 kHz, 0.8% THD 40 W (Center, 4 ohms) 22 W ×2 (Rear, 8 ohms)
TOTAL	20 Hz-20 kHz, 0.8% THD 200 W

Input sensitivity/Impedance

1/2/5.1 CH	530 mV, 45 kohms
CONTROL S	
(for U.S. and Canadian customers only)	Only for Sony XBR² and Sony Projection TV

Output

1	530 mV, 1 kohms
External center	28 W (8 ohms, 20 Hz-20 kHz, 0.8 % THD), 4-8 ohms
Wireless rear speaker	Accepts only EMT-70 (SA-IF70)
R-ch speaker	Accepts only SAVA-59 R-ch speaker with supplied exclusive speaker cord

Tone control

Front/Center	Bass: ±10 dB at 100 Hz Treble: ±10 dB at 10 kHz

Speaker section

Type and speaker unit

Front speaker

Center (internal)	Full-range bass reflex type, 10cm (4 inches) cone type ×2
Front	2 way bass reflex type, tweeter: 5cm (2 inches) cone type ×2 woofer: 12cm (4 3/4 inches) cone type ×2
Sub woofer	SAW type, 16cm (6 3/8 inches) cone type ×2

Center speaker (external)

	Full-range bass reflex type, 8cm (3 1/4 inches) cone type ×2
Rear	Fullrange bass reflex type, 10cm (4 inches) cone type ×2

General

Power requirement

U.S.A. and Canada:	120 V AC, 60 Hz
Other models:	230 V AC, 50/60 Hz

Power consumption

U.S.A.:	105 W
Canada:	115 W
Other models:	135 W

Dimensions

Front speaker:	Approx. 285 × 1,100 × 460 mm (11 1/4 × 43 3/8 × 18 1/8 inches) (w/h/d, including speaker base)
Center speaker:	Approx. 280 × 110 × 140 mm (11 1/8 × 4 3/8 × 5 5/8 inches) (w/h/d, including grille net)
Rear speaker:	Approx. 135 × 235 × 185 mm (5 3/8 × 9 3/8 × 7 3/8 inches) (w/h/d, including grille net)

Mass

Front speaker(L):	24 kg (52 lb 15 oz)
Front speaker(R):	21 kg (46 lb 5 oz)
Center speaker:	2 kg (4 lb 7 oz)
Rear speaker (L, R):	3 kg (6 lb 10 oz) each

Supplied accessories

External center speaker SS-CN15VA (1)
Wireless rear speaker system SA-IF70 (L), (R)
Wireless infrared transmitter EMT-70 (1)
Front L/R speaker connecting cord, 3.5 m (1)
Center speaker connecting cord, 2.5 m (1)
Audio connecting cord, 1.5 m (1)
Remote commander (remote) RM-J59 (1)
Sony size-AA (R6) batteries (2)
Foot pads (4)

Optional

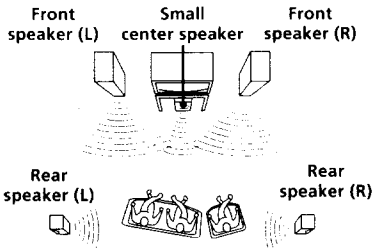
Inter-Changeable Panel (U.S.A. only)
TAC-VA57/BM
TAC-VA57/MM

Design and specifications are subject to change without notice.

Glossary

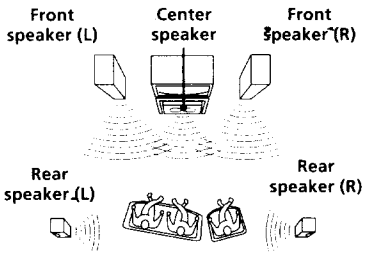
Center mode
Speaker setting to enhance the Dolby Pro Logic Surround mode. Select one of the following four center modes according to your speaker system.

- **NORMAL mode**
  Select NORMAL mode if you connect a small-sized center speaker to this speaker system. Since a small speaker cannot produce enough bass, the bass sound of the center channel is output from the front speakers.



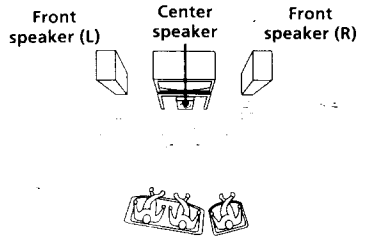
The test tone is output as shown on page 11.

- **WIDE mode**
  Select WIDE mode if you connect a center speaker equivalent to the two front speakers. With the WIDE mode, you can take full advantage of Dolby Surround sound.



The test tone is output as shown on page 11.

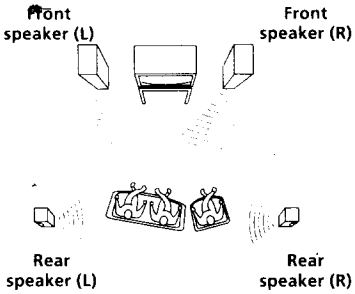
- **3 STEREO mode**
  Select 3 STEREO mode if you do not want to use the rear speakers to output sound. The sound of the rear channel is output from the front speakers to let you experience some of the surround sound effect without using rear speakers.



The test tone is output as follows:

Front (L) → Center → Front (R)

- **PHANTOM mode**
  Select PHANTOM mode if you do not want to use the center speaker to output sound. The sound of the center channel is output from the front speakers.



The test tone is output as follows:

Front (L) + (R) → Rear

Delay time
Time lag between the surround sound output from the front speakers and that from the rear speakers. By adjusting the delay time of the rear speakers, you can obtain the feeling of presence. Make the delay time longer when you have placed the rear speakers in a small room or close to your listening position, and make it shorter when you have placed them in a large room or far from your listening position.

Dolby Pro Logic Surround
As one method of decoding Dolby Surround, Dolby Pro Logic Surround produces four channels from two-channel sound. Compared with the former Dolby Surround system, Dolby Pro Logic Surround reproduces left-to-right panning more naturally and localizes sounds more precisely. To take full advantage of Dolby Pro Logic Surround, you should have one pair of rear speakers and a center speaker. The rear speakers output monaural sound.

Dolby Surround
Encoding and decoding system for Dolby Surround sound for consumer use. Dolby Surround decodes the extra channels in the Dolby Surround-encoded sound tracks of movie videos and TV programs and produces sound effects and echoes that make the action seem to envelope you.

Dolby Digital (AC-3)
This sound format for movie theaters is more advanced than Dolby Pro Logic Surround. In this format, the rear speakers output stereo sound with an expanded frequency range and a subwoofer channel for deep bass is independently provided. This format is also called "5.1" because the subwoofer channel is counted as 0.1 channel (since it functions only when a deep bass effect is needed). All six channels in this format are recorded separately to realize superior channel separation. Furthermore, since all the signals are processed digitally, less signal degradation occurs. The name "AC-3" comes from the fact that it is the third audio coding method to be developed by the Dolby Laboratories Licensing Corporation.

5.1-channel input (5.1 CH IN) jacks
These jacks are used to input decoded multi-channel format audio signals (e.g., Dolby Digital (AC-3), DTS, etc.), allowing you to enjoy 5.1 channel surround sound. Use these jacks to connect a multi-channel decoder or a DVD player with a built-in multi-channel decoder.

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